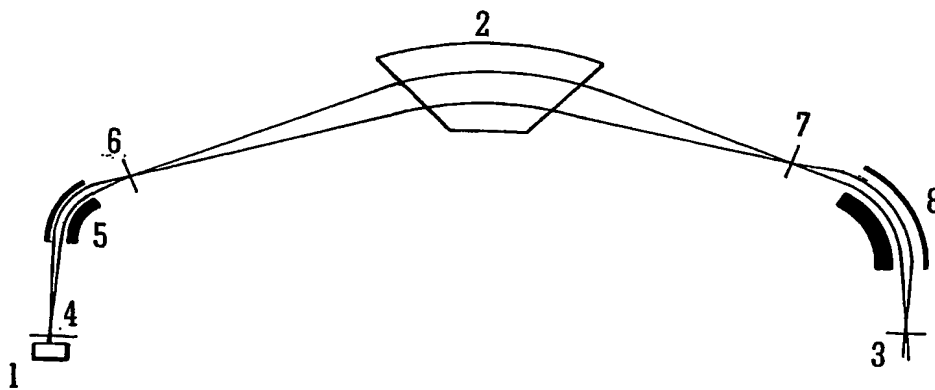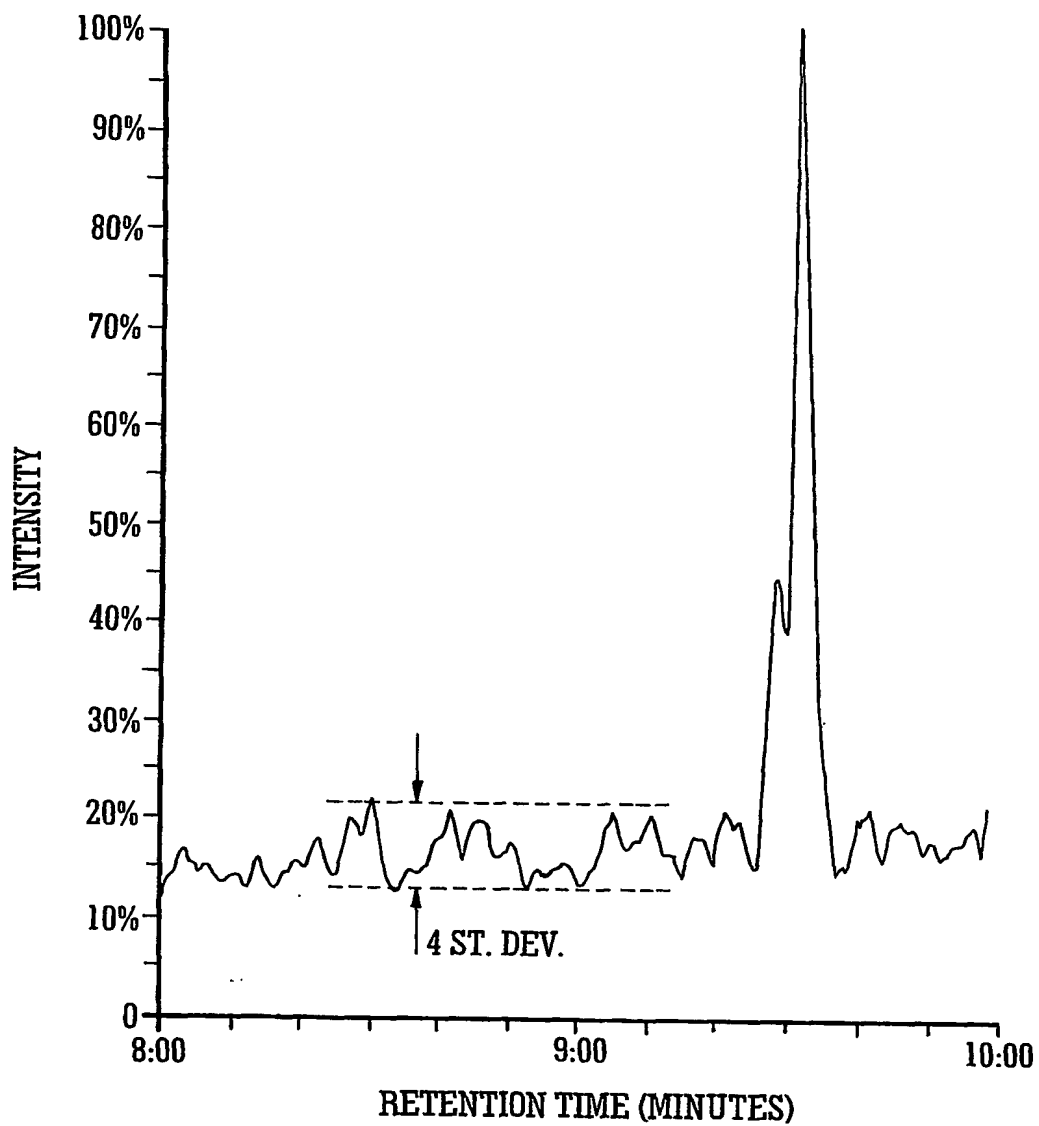**FIG. 1**

PRIOR ART

FIG. 2

PRIOR ART

FIG. 3

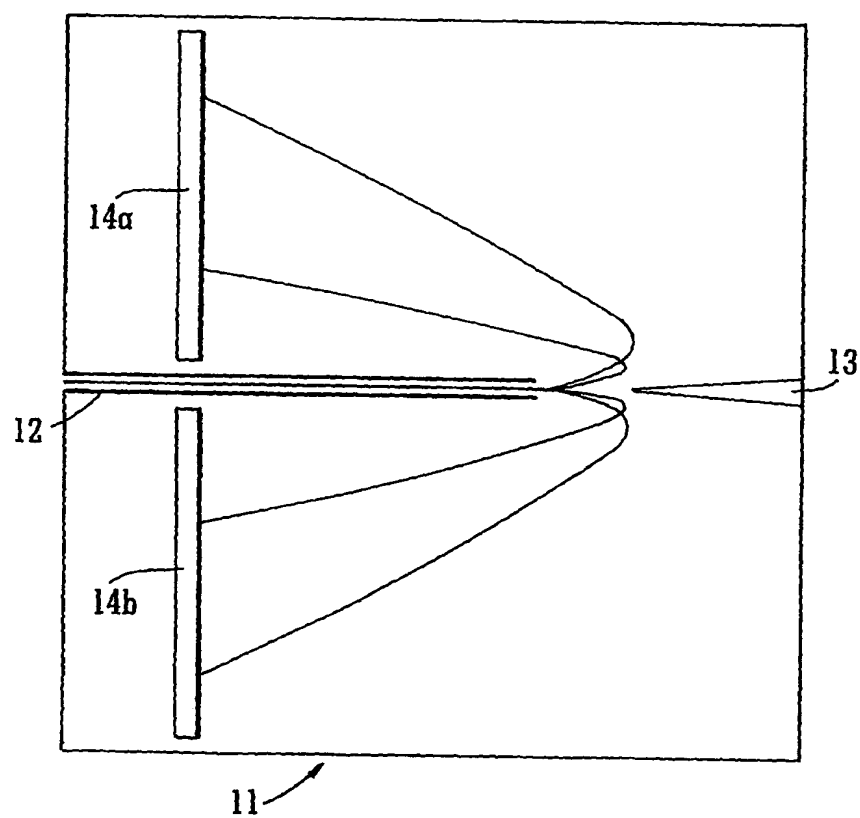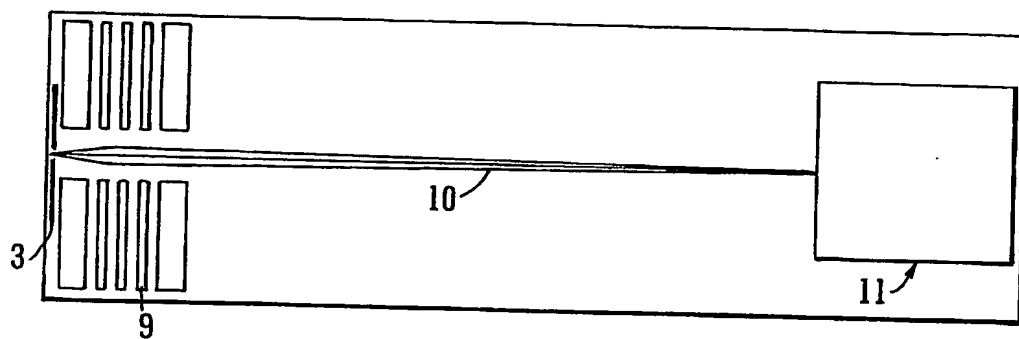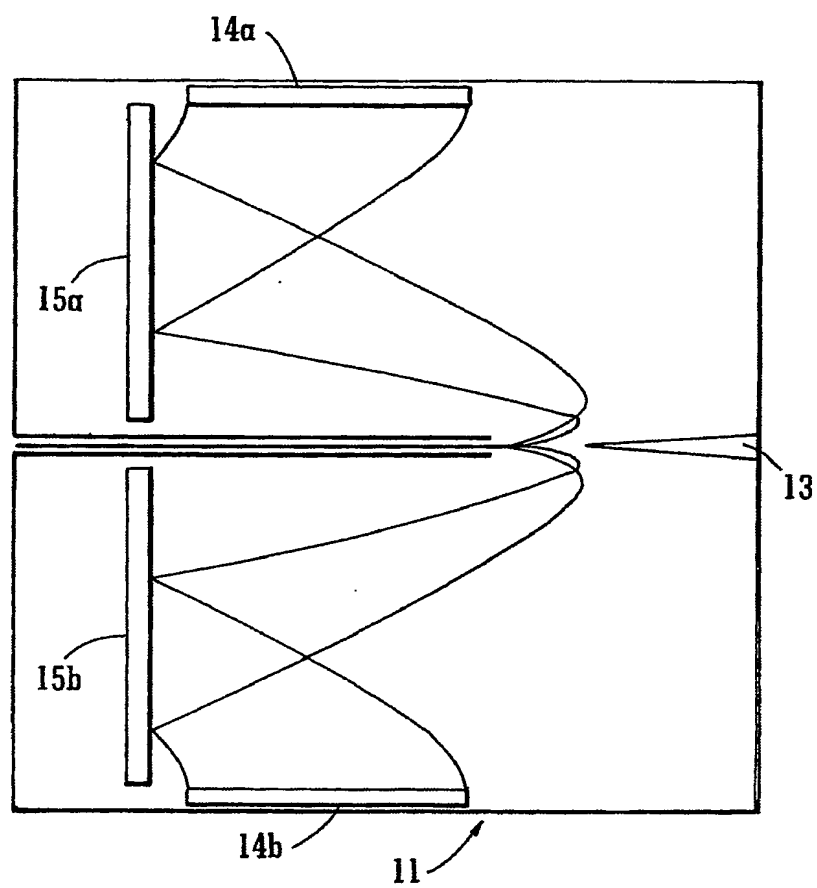PRIOR ART
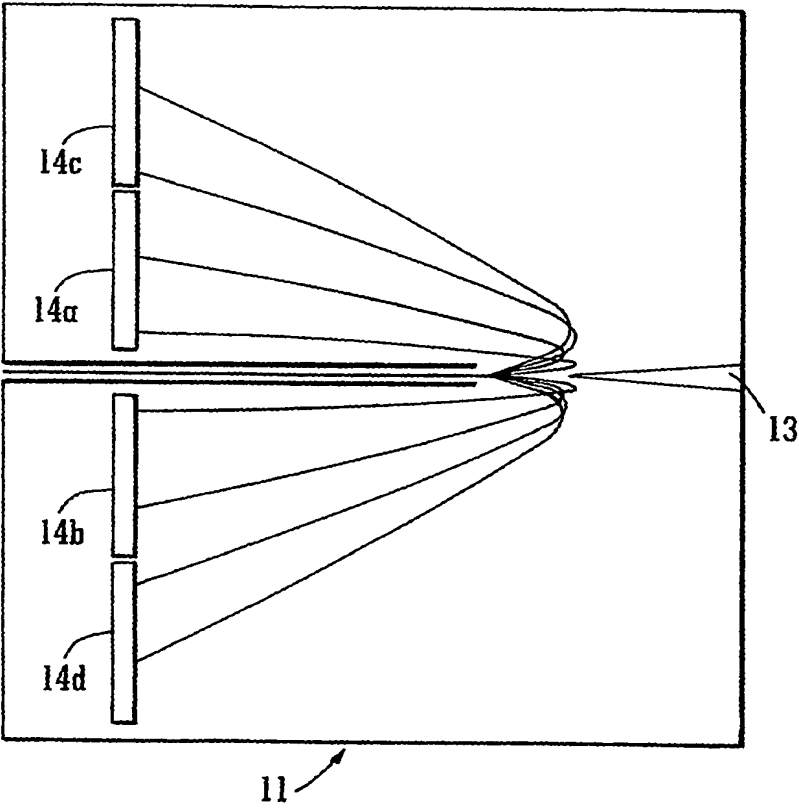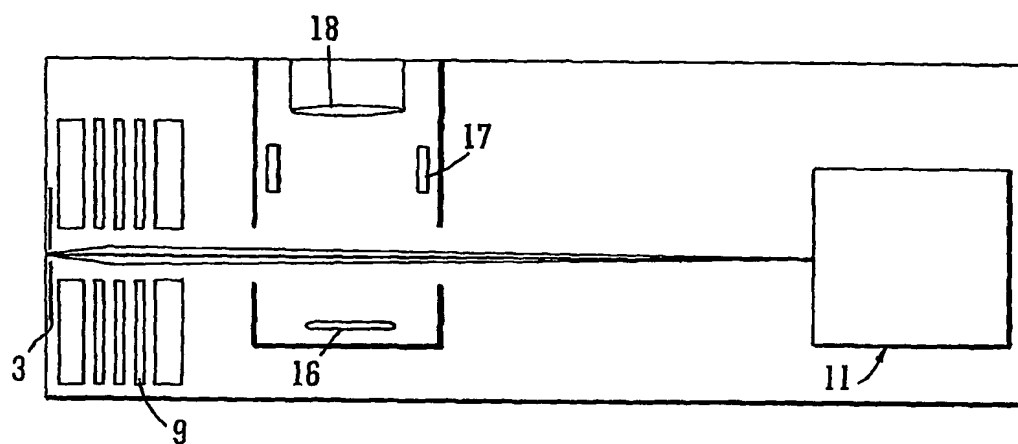
FIG. 4

FIG. 5

FIG. 6

FIG. 7

FIG. 8
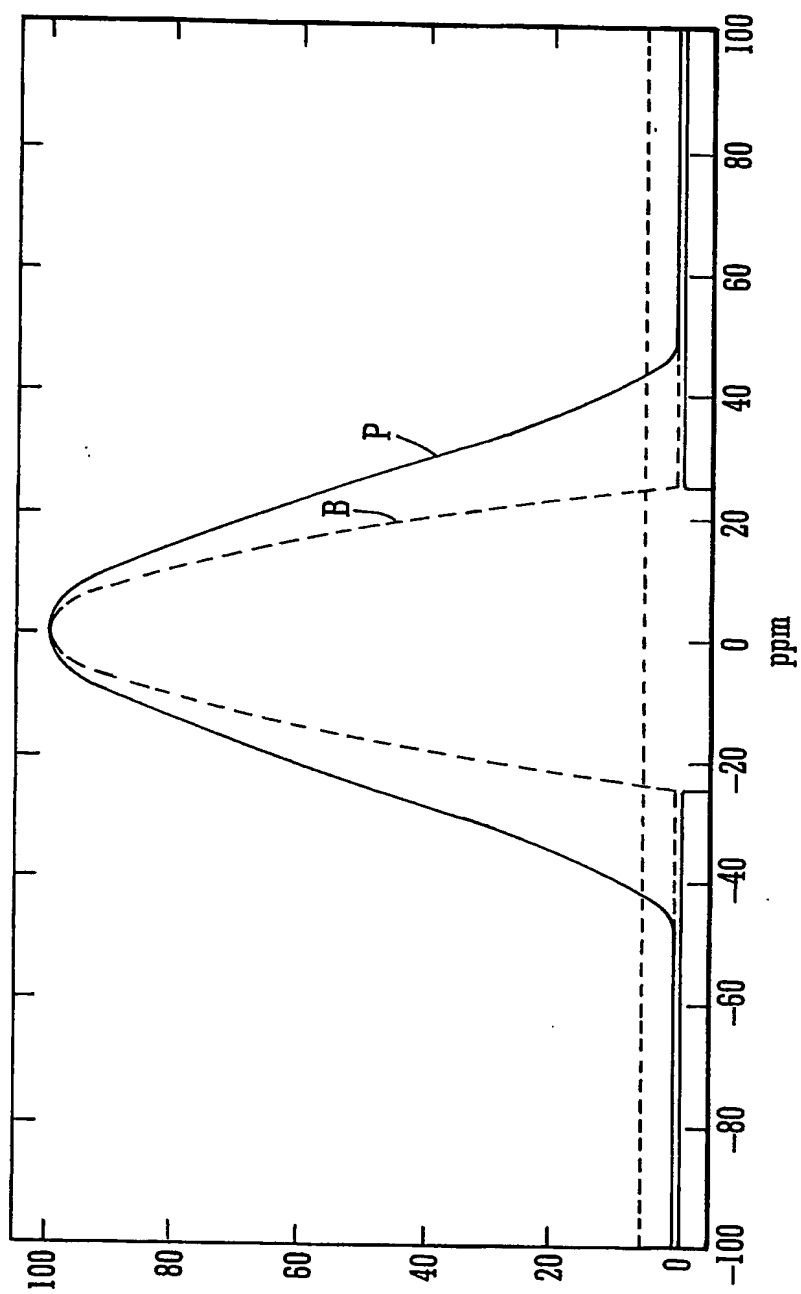
FIG. 9

PRIOR ART

FIG. 10

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11
Ion Beam Shift (ppm)	Count on 1st detector	Count on 2nd detector	Total count	Average count per detector	Std dev (σa) for average	Difference D1 in units of (σa)	Difference D2 in units of (σa)	P1 (%)	P2 (%)	P (%)
$i =$	$s1(i) =$	$s2(i) =$	$s(i) =$	$sa(i) =$	$\sigma a(i) =$	$D1(i) =$	$D2(i) =$	$P1(i) =$	$P2(i) =$	$Pr(i) =$
-25	0	10	10	5	2.24	2.24	2.24	97.47	97.47	0.064
-20	0.5	12.6	13.1	6.55	2.56	2.37	2.37	98.21	98.21	0.032
-15	1.9	14	15.9	7.94	2.82	2.14	2.14	96.76	96.76	0.105
-10	4.1	14	18.1	9.05	3.01	1.64	1.64	89.83	89.83	1.033
-5	6.9	12.6	19.5	9.76	3.12	0.91	0.91	63.77	63.77	13.125
0	10	10	20	10	3.16	0	0	0	0	100
5	12.6	6.9	19.5	9.76	3.12	0.91	0.91	63.77	63.77	13.125
10	14	4.1	18.1	9.05	3.01	1.64	1.64	89.83	89.83	1.033
15	14	1.9	15.9	7.94	2.82	2.14	2.14	96.76	96.76	0.105
20	12.6	0.5	13.1	6.55	2.56	2.37	2.37	98.21	98.21	0.032
25	10	0	10	5	2.24	2.24	2.24	97.47	97.47	0.064

FIG. 11

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11
Ion Beam Shift (ppm)	Count on 1st detector	Count on 2nd detector	Total count	Average count per detector	Std dev (σa) for average	Difference D1 in units of (σa)	Difference D2 in units of (σa)	P1 (%)	P2 (%)	P (%)
$i =$	$s1(i) =$	$s2(i) =$	$s(i) =$	$sa(i) =$	$\sigma a(i) =$	$D1(i) =$	$D2(i) =$	$P1(i) =$	$P2(i) =$	$Pr(i) =$
-45	23.2	69	92.2	46.11	6.79	3.37	3.37	99.93	99.93	0
-40	25.9	67.9	93.8	46.91	6.85	3.07	3.07	99.78	99.78	0
-35	28.7	66.5	95.2	47.62	6.9	2.74	2.74	99.39	99.39	0
-30	31.6	64.9	96.5	48.24	6.95	2.4	2.4	98.35	98.35	0.027
-25	34.5	63	97.6	48.78	6.98	2.04	2.04	95.84	95.84	0.173
-20	37.6	60.9	98.4	49.21	7.02	1.66	1.66	90.32	90.32	0.937
-15	40.6	58.5	99.1	49.56	7.04	1.27	1.27	79.52	79.52	4.194
-10	43.7	55.9	99.6	49.8	7.06	0.86	0.86	61.02	61.02	15.191
-5	46.9	53	99.9	49.95	7.07	0.44	0.44	33.81	33.81	43.817
0	50	50	100	50	7.07	0	0	0	0	100
5	53	46.9	99.9	49.95	7.07	0.44	0.44	33.81	33.81	43.817
10	55.9	43.7	99.6	49.8	7.06	0.86	0.86	61.02	61.02	15.191
15	58.5	40.6	99.1	49.56	7.04	1.27	1.27	79.52	79.52	4.194
20	60.9	37.6	98.4	49.21	7.02	1.66	1.66	90.32	90.32	0.937
25	63	34.5	97.6	48.78	6.98	2.04	2.04	95.84	95.84	0.173
30	64.9	31.6	96.5	48.24	6.95	2.4	2.4	98.35	98.35	0.027
35	66.5	28.7	95.2	47.62	6.9	2.74	2.74	99.39	99.39	0
40	67.9	25.9	93.8	46.91	6.85	3.07	3.07	99.78	99.78	0
45	69	23.2	92.2	46.11	6.79	3.37	3.37	99.93	99.93	0

FIG. 12